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10/594,867	09/28/2006	Jean-Jacques Sacre	PF040049	8173
24498 7590 01/26/2010 Robert D. Shedd, Patent Operations THOMSON Licensing LLC P.O. Box 5312 Princeton, NJ 08543-5312				
EXAMINER BYRNIE-DIAKUN, JORI S				
ART UNIT		PAPER NUMBER		
2878				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/594,867

**Applicant(s)**

SACRE ET AL.

**Examiner**

Jori S. Byrne-Diakun

**Art Unit**

2878

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-20 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 10/13/2009

### **DETAILED ACTION**

*This Office Action is in response to the Applicants' communication (amendment) filed on 13 October 2009. In virtue of this communication, Claims 14-20 are currently presented in the instant application (Claims 14-15 are withdrawn from consideration).*

#### ***Response to Arguments***

1. Applicant's arguments with respect to Claims 16-17 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Objections***

2. Claims 16-17 are objected to because of the following informalities:
  - Claim 16, Line 2: "illumination means" should be replaced with --an illumination means--;
  - Claim 16, Line 18: "either" should be deleted;
  - Claim 16, Line 18: "assymmetric" should be replaced with --asymmetric--; and
  - Claim 17, Line 1: "it" should be replaced with --the projection system--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Takaura et al. (U.S. Patent No. 7,048,388 B2; herein referred to as Takaura).

**With respect to Claim 16**, Takaura discloses, in Fig. 6, a projection system comprising an illumination means (not shown, but necessary to generate “illumination light”) that generates an illumination beam (termed as illumination light), an imager (image display panel 1) that creates an imaging beam from the illumination beam, the imaging beam being representative of an image, a projection module intended to project the image on a screen (screen 2) defining a specified projection plane, said module comprising an objective (transmission optical system 3) for refracting the imaging beam having a refractive portion comprising lenses, a curved mirror (reflective surface 8) for deflecting the image beam, and at least two deflection surfaces (comprising reflective surfaces 4, 5, 6, and 7) for deflecting the imaging beam emanating from the objective, these surfaces being placed in the path of the imaging beam between the objective and the curved mirror (see Fig. 6), wherein the curved mirror is an aspheric mirror having an asymmetric shape defining an optical axis that coincides with the optical axis of the objective (see Col. 16, Lines 28-30 and Fig. 6; wherein reflecting surface 8 is aspheric and, as shown in Fig. 6, has an optical axis coinciding, as the optical axes are sequential and none interfering, with that of transmission optical system 3).

**With respect to Claim 17**, Takaura further discloses, in Fig. , that the projection system comprises a projection screen (screen 2), the projection module illuminating the projection screen via the rear (see Fig. 6; wherein the system is clearly a rear projection system).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takaura in view of Burstyn (U.S. Patent No. 6,406,150 B1).

**With respect to Claim 18**, Takaura discloses, in Fig. 6, all limitations of Claim 1 further including that the objective is disposed in the open space below the optical system.

Takaura does not explicitly teach that the angle between the optical axis of the objective and the projection plane does not exceed  $10^\circ$ .

Burstyn discloses, in Fig. 1, arranging the objective (projector 24, specifically the projection lens of said projector) such that the axis of the objective and the projection plane does not exceed  $10^\circ$  (see Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to arrange the objective of Takaura such that the angle between the axis of said objective and said projection plane does not exceed  $10^\circ$ , as taught by Burstyn, to optimize the size of the unit by compacting the rear projection system while maintaining optimal sharpness and brightness of the projected image (see Burstyn, Col. 1, Lines 57-60).

**With respect to Claim 19**, Takaura discloses, in Fig. 6, all limitations of Claim 18 as cited above further including the projected image is rectangular.

Takaura does not explicitly teach that when the projected image is rectangular, the angle between the optical axis of the objective and the long side of the image projected on the screen does not exceed 10 degrees.

Burstyn discloses, in Fig. 1, that the projected image is rectangular and further discloses arranging objective (24, termed a "projector") such that the angle between the axis of said objective and the long side of the image projected on said screen does not exceed  $10^\circ$  (see Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to arrange the objective of Suzuki such that the angle between the axis of said objective and said

projection plane does not exceed  $10^\circ$ , as taught by Burstyn, to optimize the size of the unit by compacting the rear projection system while maintaining optimal sharpness and brightness of the projected image (see Burstyn, Col. 1, Lines 57-60).

**With respect to Claim 20**, Takaura discloses, in Fig. 6, all limitations of Claim 18 as cited above further including the projected image is rectangular.

Takaura does not explicitly teach that when the projected image is rectangular, the angle between the optical axis of the objective and the short side of the image projected on the screen does not exceed 25 degrees.

Burstyn discloses, in Fig. 1, that the projected image is rectangular and further discloses arranging objective (24, termed a “projector”) such that the angle between the axis of said objective and the short side of the image projected on said screen does not exceed  $25^\circ$  (see Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to arrange the objective of Suzuki such that the angle between the axis of said objective and said projection plane does not exceed  $10^\circ$ , as taught by Burstyn, to optimize the size of the unit by compacting the rear projection system while maintaining optimal sharpness and brightness of the projected image (see Burstyn, Col. 1, Lines 57-60).

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action (specifically the addition of “a second opening section on a surface opposite to the

first opening section” to the independent Claim 1, changing the scope of the claim).

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jori S. Byrne-Diakun whose telephone number is (571) 270-7555. The examiner can normally be reached on 7:30 AM to 5 PM EST, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. B./  
Examiner, Art Unit 2878  
01/15/2010

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